

IN THE UNITED STATES DISTRICT COURT  
FOR THE WESTERN DISTRICT OF TEXAS  
WACO DIVISION

NORDIC INTERACTIVE TECHNOLOGIES  
LLC,

*Plaintiff,*

v.

SAMSUNG ELECTRONICS CO., LTD. and  
SAMSUNG ELECTRONICS AMERICA,  
INC.,

*Defendants.*

Civil Action No. 6:20-CV-00064

**JURY TRIAL DEMANDED**

**DEFENDANTS' RESPONSIVE CLAIM CONSTRUCTION BRIEF**

## **TABLE OF CONTENTS**

	<u>Page</u>
I. Introduction .....	1
II. Argument .....	1
A. '097 Patent Terms .....	1
1. “middleware software” (Claims 19-24) .....	1
a. Nordic does not address why lexicography does not apply .....	2
b. The intrinsic evidence does not support Nordic’s construction .....	4
c. The extrinsic evidence also does not support Nordic’s construction .....	6
2. “the middleware layer” (Claims 20-21) .....	9
a. The implicit antecedent basis is “the middleware software” .....	10
b. Nordic provides no support for its construction .....	16
B. '095 Patent Term: .....	17
1. “call initiation signals” (Claims 16, 30) .....	17
III. Conclusion .....	20

## **TABLE OF AUTHORITIES**

	<u>Page(s)</u>
<b><u>Cases</u></b>	
<i>Bicon, Inc. v. Straumann Co.</i> , 441 F.3d 945 (Fed. Cir. 2006).....	17
<i>Dell Inc. v. Acceleron, LLC</i> , 818 F.3d 1293 (Fed. Cir. 2016).....	17
<i>Energizer Holdings, Inc. v. Int'l Trade Comm'n</i> , 435 F.3d 1366 (Fed. Cir. 2006).....	9, 12
<i>Eon Corp. IP Holdings v. Silver Spring Networks</i> , 815 F.3d 1314 (Fed. Cir. 2016).....	17
<i>Gree, Inc. v. Supercell Oy</i> , No. 2:19-CV-00070-JRG-RSP, 2020 WL 2332144 (E.D. Tex. May 11, 2020).....	15
<i>Kopykake Enters., Inc. v. Lucks Co.</i> , 264 F.3d 1377 (Fed. Cir. 2001).....	3, 8
<i>Lodsys, LLC v. Brother Int'l Corp.</i> , No. 2:11-CV-00090-JRG, 2013 WL 2949959 (E.D. Tex. June 14, 2013).....	18
<i>Martek Biosciences Corp. v. Nutrinova, Inc.</i> , 579 F.3d 1363 (Fed. Cir. 2009).....	5
<i>O2 Micro Int'l, Ltd. v. Beyond Innovation Tech. Co.</i> , 521 F.3d 1351 (Fed. Cir. 2008).....	17
<i>Phillips v. AWH Corp.</i> , 415 F.3d 1303 (Fed. Cir. 2005) ( <i>en banc</i> ).....	<i>passim</i>
<i>SkinMedica, Inc. v. Histogen Inc.</i> , 727 F.3d 1187 (Fed. Cir. 2013).....	8
<i>Smartflash LLC v. Apple Inc.</i> , 77 F. Supp. 3d 535 (E.D. Tex. 2014) .....	15
<i>Summit 6 LLC v. HTC Corp.</i> , No. 7:14- CV-00014-O, 2015 WL 11117868 (N.D. Tex. Mar. 21, 2015) .....	15
<i>Superguide Corp. v. DirecTV Enter., Inc.</i> , 358 F.3d 870 (Fed. Cir. 2004).....	3

*Toro Co. v. White Consolidated Industries Inc.*,  
199 F.3d 1295, 53 USPQ2d 1065 (Fed. Cir. 1999).....8

*Trover Grp., Inc. v. Dedicated Micros USA*,  
No. 2:13-CV-1047-WCB, 2015 WL 1263358 (E.D. Tex. Mar. 19, 2015) .....9

**Other Authorities**

MPEP 2111.01 .....8

## I. INTRODUCTION

Nordic's Opening Brief (Dkt. No. 35) is a winding path of contradiction and diversion. For example, Nordic states that the "patent claim construction process begins with the language used in the claims," but then ignores the language of the claims that directly contradicts its construction. *Id.* at 5; compare Samsung's Opening Br. (Dkt. No. 34) at 10-11 (demonstrating how the dependent claims cannot be reconciled with Nordic's proposed construction of "call initiation signal"). Nordic further states that it follows "black letter law" and that one must look at the specification (Nordic's Opening Br. at 1), but it then does not cite (much less address) the key disputed lexicography in the specification for the term "middleware software" for the Court to consider. *Id.* at 6-7; compare Samsung's Opening Br. at 5-6 (discussing clear instance of lexicography).

Indeed, throughout its Opening Brief, Nordic says it is applying the law correctly, and says it is citing the relevant evidence, but the proof is in the pudding. And it is plain when tested that what Nordic has is a mishmash of misframed (and missing) evidence and misapplied law.

## II. ARGUMENT

### A. '097 Patent Terms

#### 1. "middleware software" (Claims 19-24)

Term	Samsung's Construction	Nordic's Construction
"middleware software"	"a software layer with an API that negotiates the communication between two applications to help an application find a counterpart application with the correct role"	"software providing discovery of applications and/or services"

**a. Nordic does not address why lexicography does not apply**

During the Parties' meet-and-confer process, Samsung made clear to Nordic that the basis of Samsung's proposed construction was lexicography. *See* Ex.<sup>1</sup> 1 (October 16, 2020 email from Nordic's counsel to Samsung's counsel] (summarizing parties' meet-and-confer and noting that, e.g., “[p]arties disagreed as to whether this was regarding lexicography or just an embodiment in the argument in this term.”).

In Nordic's Opening Brief, however, Nordic inexplicably fails to address why lexicography should not apply.<sup>2</sup> Instead, Nordic summarily accuses Samsung of attempting to “import one embodiment” into the claim language—and does not discuss any evidence as to why. Nordic's Opening Br. at 8.

This bare accusation against Samsung is not only incorrect, but bizarre because it is Nordic that is relying on a specific embodiment. In particular, Nordic states that its construction is supported by the specification, which “specifies” what middleware software “provides”:

applications and/or services” is supported by the claim language and the specification of the '097 Patent. Indeed, the '097 Patent specifies that “middleware software provid[es] advanced application and service discovery and execution.” '097 Patent at 10:8-10; *see also* '097 Patent, Fig. 5; *see also* Ex. 3 (Gitlin Declaration) at ¶¶ 26, 35. Claim terms are generally given their

Nordic's Opening Br. at 6 (emphasis added).

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<sup>1</sup> “Ex.” refers to the Exhibits attached to the Declaration of Jin-Suk Park, filed concurrently herewith.

<sup>2</sup> To be clear, lexicography is not a rebuttable presumption. When found to exist (as should be here), it controls. *See, e.g., Phillips v. AWH Corp.*, 415 F.3d 1303, 1316 (Fed. Cir. 2005) (*en banc*) (holding that if the specification reveals “a special definition given to a claim term by the patentee that differs from the meaning it would otherwise possess[,] . . . the inventor's lexicography governs”) (emphasis added).

But what Nordic failed to inform the Court, and what it excised from its quote, are the three words that start the sentence: “**In one embodiment**”:

layer. **In one embodiment**, the middleware layer includes dedicated middleware software providing advanced application and service discovery and execution. **In one embodiment**,

’097 Patent at 10:8-10 (emphasis added).

In addition, the paragraph in which Nordic’s cited sentence occurs begins with “[a]s shown in **FIG. 5**....” *Id.* at 9:63 (emphasis added). And, after this paragraph, the specification continues to discuss Fig. 5. *See id.* at 10:33, *et seq.* Indeed, apart from the excerpt in the specification discussing Fig. 5, Nordic also points to Fig. 5 itself and that specific embodiment’s use of middleware “in application and service discovery.” *See* Nordic’s Opening Br. at 7.

This is in direct contrast with the lexicographical definition. In particular, the definition occurs between the discussion of Figs. 2A/B and 3A, and is not tied to any specific figure or embodiment.<sup>3</sup> ’097 Patent at 6:31-7:3. Moreover, the sentence that contains the definition literally starts with the term in dispute: “Middleware software is....” *Id.* at 6:39-43; *see also* Samsung’s Opening Br. at 5-7 (discussing same).

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<sup>3</sup> Nordic relies on *Superguide Corp. v. DirecTV Enter., Inc.*, 358 F.3d 870, 875 (Fed. Cir. 2004) to argue that a construction should not “import one embodiment in the claim language.” Nordic’s Opening Br. at 8. Though *Superguide* was decided before *Phillips* (and thus did not have the benefit of the analytical framework provided by that case), Samsung agrees with that general principle (a principle that, ironically, Nordic violates with its construction). Samsung disagrees, however, that *Superguide* is applicable here, because when there is lexicography, the patentee’s definition controls. Indeed, the *Superguide* opinion itself distinguished its facts from a case where lexicography applied. *See Superguide*, 358 F.3d at 879 (distinguishing *Kopykake Enters., Inc. v. Lucks Co.*, 264 F.3d 1377 (Fed. Cir. 2001) by stating, “[t]hat holding . . . does not have relevance here because the patentees in *Kopykake* explicitly limited the claim term . . .”).

In further contrast, in the discussion of Figs. 2A/B, the specification separately discusses the middleware software specific to those embodiments. In particular, the specification states that for Fig. 2A:

**Middleware software 220** includes an application program interface (API) 221 that help an application program running on server 110 find and communicate with a counterpart application running on terminal 120. To quickly locate each application, **middleware software 220** also includes application directory 230 to track the role assumed by each application that is resident in each device in piconet 100.

'097 Patent at 5:56-63 (emphasis added). The description for Fig. 2B is identical, except with reference to its figure-specific annotations (e.g., "Middleware software 270"). *Id.* at 6:14-21.

Samsung's construction not only covers these descriptions, but, more to the point, is not limited to these descriptions. *See, e.g.*, Samsung's Opening Br. at 6-7 (detailing occurrences of term "middleware software" with no other/contrary definition). Instead, as detailed in Samsung's Opening Brief, Samsung's construction applies the definition provided by the patentee in the specification in a clear instance of lexicography, untied to any embodiment. *See, e.g., id.* at 5-7.

**b. The intrinsic evidence does not support Nordic's construction**

Even putting aside Nordic's failure to address lexicography, there is no support for the specific words used in Nordic's construction. In particular, Nordic's proposed construction is: "**software providing discovery of applications and/or services.**" The support in the specification Nordic points to, however, states:

In one embodiment, the middleware layer includes dedicated middleware software providing **advanced application and service discovery and execution.**

'097 Patent at 10:8-10 (emphasis added). As shown by the portions in bold above, Nordic's construction does not even comport with the support it relies on. For example, without explanation

or justification, Nordic expands the description with the disjunctive “or” (i.e., “applications **and/or** services”) and removes the word “advanced” and “and execution.”

To be clear, it is not that Nordic must use every word in the cited passage (as they are not asserting lexicography) or that the cited passage should be used as a basis for the Court’s construction (it should not). But rather that, although Nordic cited to the example of “middleware software” above as support for its construction, Nordic failed to explain how the example informs the construction (and how it does not).

The language in Fig. 5 that Nordic points to is no better. *See* Nordic’s Opening Br. at 7. Specifically, in Fig. 5, the portion that Nordic relies on for support states: “APPLICATION AND SERVICE DISCOVERY USING MIDDLEWARE.” *Id.* Nordic does not explain how this then leads to (or otherwise impacts) their proposed construction. *Id.*

In fact, in a review of the intrinsic evidence, Samsung believes that the closest analog to Nordic’s construction appears in asserted Claim 19 itself. Specifically, the second element of Claim 19 recites:

determining, whether a discovered nearby device provides an indication that it may include a middleware software, the **middleware software configured for providing application and service discovery**....

’097 Patent, Claim 19 at 12:61-64.

The issue, however, is that the language (i.e., in Nordic’s proposed construction) is **already in the claim**—so construing “middleware software” with this same language would be redundant (and is evidence against Nordic’s construction). To the extent Nordic would argue that their construction is broader (i.e., with the inclusion of the disjunctive term “and/or”) that would lead to a second problem—they have expanded the term and inserted “or” without any explanation or justification. Ultimately, Nordic does nothing to explain how its proposed construction comports to (or is otherwise derived from) the intrinsic record.

**c. The extrinsic evidence also does not support Nordic's construction**

Nordic relies on two sources of extrinsic evidence: a dictionary and an expert declaration. As a threshold issue, because the term is defined by lexicography in the intrinsic evidence, there is no need to look further, much less to the extrinsic evidence. *See Martek Biosciences Corp. v. Nutrinova, Inc.*, 579 F.3d 1363, 1382 (Fed. Cir. 2009) (“because the patentee explicitly defined [the term] … extrinsic evidence is simply irrelevant”). But even if the Court were to consider the evidence, it is not helpful to Nordic.

First, as to the dictionary, Nordic cites a technical dictionary that contains **three separate possible definitions**. In its Opening Brief, however, Nordic **misrepresents** them. Specifically, though Nordic appears to quote the dictionary, it has excised part of the first definition as well as the entirety of the second. In particular, Nordic quotes the dictionary as follows:

applications and/or services.” *See* Ex. 4 (Microsoft Computer Dictionary) at NORDIC001264-NORDIC001265 (“Software that sits between two or more types of software and translates information between them. Middleware can cover a broad spectrum of software and generally sits between an application and an operating system, a network operating system, or a database management system. Software development tools that enable users to create simple programs by selecting existing services and linking them with a scripting language”); *see also* Ex. 3

Nordic’s Opening Br. at 8.

In contrast, however, the actual dictionary contains the additional definitions below (highlighted):

**middleware** *n.* **1.** Software that sits between two or more types of software and translates information between them. Middleware can cover a broad spectrum of software and generally sits between an application and an operating system, a network operating system, or a database management system. Examples of middleware include CORBA and other object broker programs and network control programs. See also CORBA. **2.** Software that provides a common application programming interface (API). Applications written using that API will run in the same computer systems as the middleware. An example of this type of middleware is ODBC, which has a common API for many types of databases. See also application programming interface, ODBC. **3.** Software development tools that enable users to create simple programs by selecting existing services and linking them with a scripting language. See also scripting language.

Nordic's Opening Br. Ex. 4 (Dkt. No. 35-4), at NORDIC001264-5 (highlighting added).

The dictionary definitions present two key issues. The first is that the Nordic's proposed construction is nowhere in the definition and so cannot be understood to be the "plain meaning." The second is that Nordic has deleted definition No. 2 in its quote to the Court. This is significant because the second definition refers to software that provides an API. That is, the use of APIs, as noted in Nordic's dictionary definition, is consistent with the patentee's (and Samsung's proposed) lexicographical definition, i.e., "a software layer with an API that negotiates the communication between two applications. . . ." More importantly, **it does not support Nordic's construction** as the dictionary definition includes APIs, which Nordic's construction omits.

The second source of extrinsic evidence is an expert declaration provided by Dr. Gitlin. Dkt. No. 35-3 ("Gitlin Decl."). As an initial matter, Samsung believes Nordic failed to comply with the Court's Scheduling Order. Dkt. No. 29 ("Scheduling Order"). However, as the Court has recently adopted a more permissive standard for disclosure, Samsung does not seek to strike the declaration on that ground. *See* Dkt. No. 36 (applying OGP version 3.2).<sup>4</sup> In any event, the

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<sup>4</sup> The Scheduling Order required that a Party intending to rely on an expert in support of its claim construction position must first provide a summary of that expert's expected testimony "including the opinions to be expressed and a general description of the basis and reasons therefore."

declaration is not only irrelevant (i.e., as the term should be construed by lexicography), but also conclusory and, therefore, entirely unhelpful.

In particular, as support for its construction, Nordic refers to paragraphs 29 and 31 of the Gitlin Decl., but those paragraphs read almost like a carbon copy of Nordic’s brief, providing nothing more than conclusions based on the same evidence and attorney arguments. These types of opinions should be given no weight. *See Phillips*, 415 F.3d at 1318 (“conclusory, unsupported assertions by experts as to the definition of a claim term are not useful to a court”); *SkinMedica, Inc. v. Histogen Inc.*, 727 F.3d 1187, 1210 (Fed. Cir. 2013) (giving no weight to expert opinions that were “conclusory and incomplete”).

In addition to asserting irrelevant opinions, Dr. Gitlin fails to even articulate the proper legal framework. In particular, Dr. Gitlin ignores the law (or even possibility) of lexicography. *See* Gitlin Decl. at ¶ 31 (discussing only disavowal). He then applies this incomplete understanding by asserting that Samsung’s construction is wrong because there is no disavowal of claim scope, but he does not discuss why lexicography does not apply. *Id.*

Instead, Dr. Gitlin strangely asserts that Samsung’s construction is not correct because the claim where the term occurs (i.e., asserted Claim 19) does not recite some of the elements in Samsung’s construction (individually or in combination). *Id.* For example, he notes that “APIs” and “counterpart applications” do not expressly appear in the claims. *Id.* But he provides no basis of **why** this fact is relevant. Indeed, Nordic makes the same argument in its Opening Brief and also fails to explain why or provide any legal basis for its argument (e.g., that terms of a proffered

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Scheduling Order at 2. And that “[a] **failure to summarize the potential expert testimony in a good faith, informative fashion may result in the exclusion of the proffered testimony.**” *Id.* (emphasis added); *compare* Ex. 2 (Nordic’s Disclosure of Extrinsic Evidence) with Dkt. No. 35-3 (Gitlin Decl.)

construction **must occur in the claims**—Samsung is unaware of any such rule).<sup>5</sup> Instead, in the epitome of circular reasoning, Nordic relies on the equally unsupported, identical opinions of Dr. Gitlin. *See* Nordic’s Opening Br. at 8 (citing Gitlin Decl. at ¶ 31).

Accordingly, as the application of lexicography is clear, and Nordic provides no reason to find otherwise, the definition provided by the patentees in the specification for the term “middleware software” must apply.

## 2. “the middleware layer” (Claims 20-21)

Term	Samsung’s Construction	Nordic’s Construction
“the middleware layer”	Indefinite or “the middleware software”	“software layer that includes middleware software”

Unlike during the Parties’ meet-and-confers, Nordic now agrees that there is an issue with the antecedent basis for this claim term. *Compare* Ex. 1 (October 16, 2020 email from Nordic’s counsel to Samsung’s counsel) (Nordic stating that “this is a distinct term”) *with* Nordic’s Opening Br. at 9 (“the antecedent basis is lacking for ‘middleware layer’”). However, while acknowledging the issue, under the guise that it is applying the law, Nordic seeks instead to rewrite Claims 20-21 to replace the word “the” with “a,” (such that Claims 20-21 would recite “*a* middleware layer”). There is no support for this rewrite. Instead, when there is an issue with antecedent basis, the most direct way to resolve it is to determine if a basis is “present by implication.” *See, e.g., Energizer*

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<sup>5</sup> The law is the opposite when lexicography applies. *See, e.g., Kopykake*, 264 F.3d at 1383 (adding “conventional” to the construction of “screen printing” in view of lexicography, even though the claims did not recite the word “conventional”); *see also, e.g., MPEP 2111.01 Plain Meaning [R-10.2019]* (“Where an explicit definition is provided by the applicant for a term, that definition will control interpretation of the term as it is used in the claim. *Toro Co. v. White Consolidated Industries Inc.*, 199 F.3d 1295, 1301, 53 USPQ2d 1065, 1069 (Fed. Cir. 1999) (meaning of words used in a claim is not construed in a “lexicographic vacuum, but in the context of the specification and drawings”).”).

*Holdings, Inc. v. Int'l Trade Comm'n*, 435 F.3d 1366, 1370-71 (Fed. Cir. 2006) (finding the preceding claim language “anode gel” to be the antecedent basis to “said zinc anode”); *Trover Grp., Inc. v. Dedicated Micros USA*, No. 2:13-CV-1047-WCB, 2015 WL 1263358, at \*9-\*10 (E.D. Tex. Mar. 19, 2015) (finding the preceding claim language “new digitized images” to be the antecedent basis to “said second images”).

**a. The implicit antecedent basis is “the middleware software”**

The construction of the term “the middleware layer” is an instance of implied antecedent basis. In particular, Claim 19 recites the following:

19. A method for performing device detection and service discovery in a mobile ad hoc communications network, comprising:

conducting an inquiry to discover nearby devices,

determining, whether a discovered nearby device provides an indication that it may include **a middleware software**, **the middleware software** configured for providing application and service discovery;

when the discovered nearby device does not provide an indication that it may include **the middleware software**:

disconnect communication session establishment with the discovered nearby device;

when the discovered nearby device provides an indication that it may include **the middleware software**:

creating a wireless short-range communication connection to discovered nearby device;

confirming whether said nearby device includes **the middleware software** by requesting corresponding information from said nearby device via the wireless short-range communication connection; and

when said nearby device includes **the middleware software**:

executing **the middleware software** to perform application and service discovery with said nearby device.

'097 Patent, Claim 19 at 12:57-13:15 (emphasis added). Claims 20 and 21, which both depend from Claim 19, recite:

20. The method of claim 19, **wherein the middleware layer** includes a service discovery protocol and at least one computer program, each computer program comprising at least one sequence of operational instructions.

21. The method of claim 19, **wherein when said at least one nearby device includes the middleware layer**, the method further comprises: executing **the middleware layer** to launch applications and services.

*Id.*, Claims 20 and 21 at 13:16-24 (emphasis added)

It is important to note that while dependent Claims 20 and 21 are at issue, the term “the middleware layer” occurs in other dependent claims. Accordingly, if the term were rewritten to be “**a** middleware layer” as Nordic requests, then it would be so for every dependent claim where the term “the middleware layer” now occurs.

However, in looking at the other dependent claims, it is clear that “the middleware layer” refers back to “the middleware software” as its antecedent basis. For example, Claim 35, which depends from Claim 19 recites, in pertinent part:

35. The method of claim 19, wherein **the executing of the middleware layer to perform application and service discovery** further comprises....

*Id.*, Claim 35 at 14:9-11. In going back to Claim 19, this language in Claim 35 is a verbatim mirror of “the middleware software” in the last element of Claim 19:

**executing the middleware software to perform application and service discovery** with said nearby device.

*Id.*, Claim 19 at 13:14-15. Moreover, the language of Claim 35 correctly references the antecedent “executing” step in Claim 19 by reciting “the executing.” In addition, language similar to this in dependent Claim 35 occurs in each set of dependent claims and is a mirror of the executing element (and “the middleware software”) in the independent claim. For example:

- Claim 17 (dependent from apparatus Claim 1): “wherein to execute the middleware layer to perform application and service discovery, the processor further configured to....”
- Claim 43 (dependent from *Beauregard* Claim 37): “wherein the program code for executing the middleware layer to perform application and service discovery further comprises....”
- Claim 51 (dependent from apparatus Claim 45): “wherein the means for executing the middleware layer to perform application and service discovery further comprises....”

This evidence alone should be sufficient to confirm that the implied antecedent basis for “the middleware layer” is “the middleware software” and so the terms should be construed the same.

But there is more. In the prosecution history of the '097 Patent, all the claims in the original application recited a “middleware layer.”<sup>6</sup> Ex. 3 ('097 Patent Prosecution History, 09/16/2003 Application) at 23-36. For example, as originally filed, method Claim 19 provided the express antecedent basis for “the middleware layer” in original Claims 20 and 21:

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<sup>6</sup> See, e.g., *Energizer Holdings*, 435 F.3d at 1370-71 (reviewing prosecution history to inform antecedent basis issue).

19. A method for performing device detection and service discovery in a mobile ad hoc communications network, comprising:

conducting an inquiry of the mobile ad hoc communications network to discover at least one nearby device, the inquiry including an indication that said at least one nearby device may include a middleware layer;

when the inquiry includes the indication that said at least one nearby device may include the middleware layer:

creating a connection to said at least one nearby device;

confirming whether said at least one nearby device includes the middleware layer;

and

when said at least one nearby device includes the middleware layer:

executing the middleware layer to perform application and service discovery.

20. The method of claim 19, wherein the middleware layer includes a service discovery protocol and at least one computer program, each computer program comprising at least one sequence of operational instructions.

21. The method of claim 19, wherein when said at least one nearby device includes the middleware layer, the method further comprises:

executing the middleware layer to launch applications and services.

*Id.* at 27 (emphasis added). After a first rejection, the applicants amended the claims to, *inter alia*, equate the middleware layer to middleware software (the amendment in claim 19 shown below):

19. (Currently Amended) A method for performing device detection and service discovery in a mobile ad hoc communications network, comprising:

conducting an inquiry of the mobile ad hoc communications network to discover at least one nearby device, the inquiry including an indication that said at least one nearby device may include a middleware layer, said middleware layer being

 middleware software for providing application and service discovery;

when the inquiry includes the indication that said at least one nearby device may include the middleware layer:

creating a connection to said at least one nearby device;

confirming whether said at least one nearby device includes the middleware layer;

and

when said at least one nearby device includes the middleware layer:

executing the middleware layer to perform application and service discovery.

Ex. 4 (3/12/2007 amendment (emphasis in original, annotation added)) at 6. After further rejections, the applicant again amended the claims, still reciting “middleware layer” in the independent claims, but this time claiming, *inter alia*, “middleware layer comprising middleware software....”

19. (Currently Amended) A method for performing device detection and service discovery in a mobile ad hoc communications network, comprising:

conducting an inquiry of the mobile ad hoc communications network to discover at least one nearby device, the inquiry including an indication that said at least one nearby device may include a middleware layer, said middleware layer being middleware software for providing application and service discovery in an ad hoc network;

when the an inquiry request result includes the an indication that said at least one nearby device may include the a middleware layer, the middleware layer comprising a middleware software for providing application and service discovery;

creating a wireless short-range connection to said at least one nearby device; confirming whether said at least one nearby device includes the middleware layer by requesting corresponding information from said at least one nearby device via the wireless short-range connection;

and

when said at least one nearby device includes the middleware layer:

executing the middleware layer to perform application and service discovery.

Ex. 5 (2/20/2008 amendment (emphasis in original, annotation added)) at 5-6. Then, after further rejections and discussions with the examiner, the applicants filed an additional amendment (along with a request for continued examination), where they removed reference to the “middleware layer” in the independent claims, but did not change any of the dependent claims (*i.e.*, the dependent claims still recited middleware layer instead of middleware software):

**Added  
“middleware  
software”**

**Deleted  
“middleware  
layer”**

19. (Currently Amended) A method for performing device detection and service discovery in a mobile ad hoc communications network, comprising:

conducting an inquiry to discover at-least-one nearby devices,  
determining whether a discovered nearby device provides an indication that it may include a middleware software, the middleware software configured for providing application and service discovery;

when the discovered nearby device does not provide an indication that it may include the middleware software:

disconnect communication session establishment with the discovered nearby device;

when the discovered nearby device provides an inquiry request result includes an indication that it at-least-one nearby device may include a the middleware layer software, the middleware layer comprising a middleware software for providing application and service discovery:

creating a wireless short-range communication connection to said at-least-one discovered nearby device;

confirming whether said at-least-one nearby device includes the middleware layer software by requesting corresponding information from said at-least-one nearby device via the wireless short-range communication connection;

and

when said at-least-one nearby device includes the middleware layer software:

executing the middleware layer software to perform application and service discovery with said nearby device.

20. (Original) The method of claim 19, wherein the middleware layer includes a service discovery protocol and at least one computer program, each computer program comprising at least one sequence of operational instructions.

21. (Original) The method of claim 19, wherein when said at least one nearby device includes the middleware layer, the method further comprises:

executing the middleware layer to launch applications and services.

Ex. 6 (10/22/2008 amendment (emphasis in original) (annotations added)) at 5-6. It is not clear from the prosecution history why the change from middleware layer to middleware software was made. *See id.* at 16 (merely distinguishing the prior art by repeating the elements of the claims). But they did argue that “[a]pplicants’ ad hoc device detection and service discovery protocol” was based on “using middleware software.” *Id.*

Regardless of why, however, the fact remains that the applicants made the change in the independent claims. And that change was inadvertently not carried through to the dependent claims. Accordingly, these facts further support the conclusion that the “middleware software” in

the independent claims is the implicit antecedent basis for “the middleware layer” in the dependent claims.<sup>7</sup>

**b. Nordic provides no support for its construction**

As a threshold issue, Nordic has never established why “the” should be viewed as “a.” Instead, Nordic just summarily concludes that the term should be construed as a “distinct term.” For the reasons above, this is not the legally correct approach for addressing an antecedent basis issue.

In addition, at the risk of giving Nordic’s argument any credence, even assuming *arguendo* that the term should be construed under a plain meaning framework despite lacking express antecedent basis, Nordic’s construction still has no support. In particular, Nordic points to the same portion of the specification (’097 Patent at 10:8-10) in support of its construction “middleware layer” as it did for “middleware software.” Nordic’s Opening Br. at 9-10. As discussed, the cited portion of the specification specifically limits itself to an embodiment:

**In one embodiment**, the middleware layer includes dedicated middleware software **providing advanced application and service discovery and execution.**

’097 Patent at 10:8-10 (emphasis added). In addition, Nordic repeats the same erroneous neither-here-nor-there approach as with “middleware software,” where its construction is not actually recited in the excerpted passages, and then does not explain why it adopts some portions but not others.

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<sup>7</sup> Nordic argues that Samsung must use expert testimony to prove invalidity (Nordic’s Opening Br. at 10), but expert testimony is not required to address an antecedent basis issue. *See, e.g., Gree, Inc. v. Supercell Oy*, No. 2:19-CV-00070-JRG-RSP, 2020 WL 2332144, at \*34 (E.D. Tex. May 11, 2020) (expert testimony not required regarding antecedent basis); *Summit 6 LLC v. HTC Corp.*, No. 7:14- CV-00014-O, 2015 WL 11117868, at \*19 (N.D. Tex. Mar. 21, 2015) (citing *Smartflash LLC v. Apple Inc.*, 77 F. Supp. 3d 535, 560 (E.D. Tex. 2014)) (same).

Nordic also relies on the opinions of Dr. Gitlin, which in turn, again, simply parrots Nordic's brief, without providing analysis or addressing any of the issues discussed above. *See* Gitlin Decl. at ¶¶ 34-36.

Accordingly, the Court should find that the antecedent basis of the term "the middleware layer" is "the middleware software" and construe the terms identically.

**B. '095 Patent Term:**

**1. "call initiation signals" (Claims 16, 30)**

Term	Samsung's Construction	Nordic's Construction
"call initiation signals"	"any signal indicating that a calling party is going to place a telephone call"	plain and ordinary meaning, or "part of a telephone number"

The parties both argue that their construction is the plain and ordinary meaning of "call initiation signals" in light of the claim language and specification, but only Samsung's construction is supported by **all** of the language in the claims and **all** of the embodiments in the specification. Nordic's proposed construction creates a dispute of claim scope that requires resolution. In particular, it not only fails to give meaning to all of the claim's terms, but its construction is contrary to the dependent claims, and is so narrow that it covers only two embodiments in the specification.

Without a construction, or at least an express repudiation of what Nordic contends the construction should be, the scope of the term would be left to the jury to determine. To be sure, under any construction, the experts and parties will eventually argue the facts of whether a product or disclosure meets the term, but the present dispute goes to the fundamental scope of the claim. Without a construction, Nordic could, for example, proffer to the jury that **only** "part of a telephone number" would meet this term—while Samsung would proffer that it could, e.g., be any signal. Then, the jury would be left to interpret the claim construction, e.g., each juror would need to

decide whether the “plain and ordinary” meaning is limited to phone numbers. This is exactly what the cases state should be within the sole providence of the Court. *See Phillips*, 415 F.3d at 1330 n.1 (“the judge, as opposed to the jury, should determine the meaning of a patent claim”); *see also Eon Corp. IP Holdings v. Silver Spring Networks*, 815 F.3d 1314, 1318 (Fed. Cir. 2016) (“This duty [of resolving the dispute regarding the scope of a claim term] resides with the court because, of course, ‘the ultimate question of construction [is] a legal question.’”’) (citation omitted); *O2 Micro Int’l, Ltd. v. Beyond Innovation Tech. Co.*, 521 F.3d 1351, 1362 (Fed. Cir. 2008) (“[w]hen the parties present a fundamental dispute regarding the scope of a claim term, it is the court’s duty to resolve it”).

As to the substance of the claim construction dispute, beginning with the words of the term itself, Samsung’s construction addresses every word in “call initiation signals,” while Nordic’s excludes two-thirds of the term. In particular, “any signal” in Samsung’s construction corresponds to “signals”; “indicating that a calling party is going to place” corresponds to “initiation”; and “telephone call” corresponds to “call.” Nordic’s construction, by contrast, only addresses the word “call” in “call initiation signals.” Nothing in “part of a telephone number” suggests “initiation” or “signal.”<sup>8</sup> Thus, Nordic’s construction is not correct. *See, e.g., Dell Inc. v. Acceleron, LLC*, 818 F.3d 1293, 1300 (Fed. Cir. 2016) (“meaning should be given to all of a claim’s terms”); *Bicon, Inc. v. Straumann Co.*, 441 F.3d 945, 950 (Fed. Cir. 2006) (“claims are interpreted with an eye toward giving effect to all terms in the claim”).

Nordic appears to state that its construction comes from the claim itself. *See* Nordic’s Opening Br. at 5. For legal support, it quotes a sentence from *Lodsys, LLC v. Brother Int’l Corp.*,

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<sup>8</sup> To be clear, Samsung is not married to the exact language used in its construction, but rather merely endeavored to formulate a construction that reflected the correct plain meaning according to the canons of construction and that addressed the dispute between the parties.

No. 2:11-CV-00090-JRG, 2013 WL 2949959, at \*4 (E.D. Tex. June 14, 2013). While Samsung does not take issue with the quoted proposition (*e.g.*, that the claims provide substantial guidance for the meaning of claim terms), the remainder of that passage (not quoted by Nordic) makes clear that **all** of the claims must be considered:

**Other claims of the patent** in question, both asserted and unasserted, can also be valuable sources of enlightenment as to the meaning of a claim term. Because claim terms are normally used consistently throughout the patent, the **usage of a term in one claim can often illuminate the meaning of the same term in other claims.**

*Id.* (citations omitted) (emphasis added).

Nordic, while in the same breath stating that the claims must be considered, cherry-picks only one and ignores the others. Even as to the claim Nordic selects to focus on, Claim 16, Nordic does not articulate how the claim supports Nordic's construction or, alternatively, how it demonstrates that Samsung's construction is not correct. *See* Nordic's Opening Br. at 5. Instead, all Nordic does is paraphrase/repeat the steps in the claim. *Id.*

Samsung, on the other hand, as detailed in its Opening Brief (at pages 10 and 11), demonstrated how Nordic's construction is directly contrary to Claim 18. Nordic's Opening Brief does not address this issue.

Samsung's construction is also consistent with every embodiment in the specification, while Nordic's construction tries to limit the term to just two embodiments. In particular, Nordic states that the '095 Patent "defines examples of call initiation signals" and points to the examples at '095 Patent, lines 5:2-9. Nordic ignores, without explanation, the other examples that do not fit into its construction, such as signals from a computer keyboard, *e.g.*, at 4:48-51 ("the call initiation signals... may be signals received from the keyboard of a computer") or the other examples cited by Samsung, such as a signal that corresponds to an activation sequence, which is not limited to a

part of a phone number but can be code characters such as # and \*. Samsung's Opening Br. at 9-10.

Nordic makes no attempt to explain why "call initiation signals" should be limited to only two embodiments, nor does it attempt to address any of the contrary embodiments. Instead, it just points to the claim language, its cherry-picked examples, and Dr. Gitlin's declaration (discussed below), then argues, *ipso facto*, that its construction is supported and correct.

As to Dr. Gitlin's declaration, as with each of the other terms above, his conclusory opinions should be given no weight. *See Phillips*, 415 F.3d at 1318 ("conclusory, unsupported assertions by experts as to the definition of a claim term are not useful to a court"). Beyond being only conclusory, they are also entirely at odds with the claims and the specification. *Id.* (noting that "a court should discount any expert testimony that is clearly at odds with the claim construction mandated by the claims themselves, the written description, and the prosecution history, in other words, with the written record of the patent") (internal citation omitted). For example, Dr. Gitlin does not consider each occurrence of the claim term in the specification or the claims. Accordingly, his opinions should be given no weight.

### **III. CONCLUSION**

For the above reasons, Samsung respectfully requests that the Court adopt its proposed constructions.

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**CERTIFICATE OF SERVICE**

I hereby certify that all counsel of record who are deemed to have consented to electronic service are being served on November 18, 2020 with a copy of this document via electronic mail.

*/s/ Jin-Suk Park*  
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